

Amendments to the Claims:

This listing of the claims will replace all prior versions, and listings, of the claims in the application:

- 1 1. (Currently amended) A spread spectrum radio frequency communication system
2 comprising:
3 a Forward Error Correction (FEC) [algorithm] encoder to encode digital data to provide a
4 plurality of symbol [groups] blocks;
5 an [interleaving algorithm] interleaver to map each one of the plurality of symbol
6 [groups] blocks into a [corresponding one of a] plurality of coherent subbands wherein each
7 symbol block is segmented into a plurality of symbols with each one of the plurality of symbols
8 grouped into sets of symbols, and each set of symbols is mapped to one of the plurality of
9 coherent subbands; and
10 a Walsh subband encoder to encode each one of the plurality of coherent subbands.
- 1 2. (Currently amended) The communication system as recited in Claim 1 wherein the FEC
2 [algorithm] encoder uses a Reed Solomon FEC code.
- 1 3. (Currently amended) The communication system as recited in Claim 1 wherein the FEC
2 [algorithm] encoder uses a Turbo Code FEC code.
- 1 4. (Currently amended) The communication system as recited in Claim 1 wherein the FEC
2 [algorithm] encoder uses a convolution FEC code.
- 1 5. (Currently amended) The communication system as recited in Claim 1 comprising a
2 transmission security device to encrypt each one of the Walsh encoded symbol [groups] sets.
- 1 6. (Original) The communication system as recited in Claim 5 comprising an Inverse
2 Fast Fourier Transform (IFFT) coupled to the transmission security device.
7. (Canceled)
8. (Canceled)

9. (Canceled)

10. (Currently amended) A method of providing a spread spectrum radio frequency communication signal comprising the steps of:

- forming a stream of data into a plurality of data packets;
- embedding each data packet into a physical layer packet comprising the steps of adding a packet header, performing a cyclic redundancy check and encoding the data;
- the encoding the data step comprising the steps of:
 - encoding baseband data with a Reed Solomon forward error correction algorithm to provide [RS symbols] symbol blocks; and
 - interleaving the [RS symbols] symbol blocks across a plurality of coherent subbands wherein each symbol block is segmented into a plurality of symbols with each one of the plurality of symbols grouped into sets of symbols, and each set of symbols is mapped to one of the plurality of coherent subbands; and
- subband-encoding each coherent subband with a low rate Walsh code.

11. (Canceled)

12. (Currently amended) The system as recited in claim [11] 13 further comprising:

- a transmission security device to encrypt each one of the Walsh encoded symbol groups;
- and
- an Inverse Fast Fourier Transform (IFFT) coupled to the transmission security device.

13. (Currently amended) A spread spectrum radio frequency communication system comprising:

- a Forward Error Correction (FEC) encoder to encode digital data to provide a plurality of symbol groups, the FEC encoder using a Reed Solomon FEC code;
- an interleaver to map each one of the plurality of symbol groups into a corresponding one of a plurality of coherent subbands;
- a Walsh subband-encoder to encode each one of the plurality of frequency subbands; and

8 [The system as recited in claim 11 further comprising:] a subband filter to excise a frequency
9 subband to prevent co-site interference with another radio system.

1 14. (Original) The system as recited in claim 13 further comprising a corresponding
2 receiver having a subband filter to excise the corresponding frequency subband as in the
3 transmitter.

1 15. (Original) The system as recited in claim 14 wherein both the transmitter and
2 receiver perform different subband mapping that avoids mapping symbols into excised subbands.